CLAIMS

1. A method for forming an attachment to an optical fiber, comprising:
positioning the optical fiber over a hot pad;
aligning the optical fiber;
raising the optical fiber;
positioning solder glass preforms on the hot pad;
melting the solder glass preforms into molten solder glass;
lowering the optical fiber into the molten solder glass; and
cooling the solder glass to form an attachment between the optical fiber and the hot pad.

2. The method of claim 1 wherein the optical fiber is grasped with tweezers to control the movement of the optical fiber.

3. The method of claim 1 wherein the melting includes passing current through the hot pad to heat the hot pad.

4. The method of claim 3 wherein the cooling includes removing the current to the hot pad.

5. The method of claim 3 wherein the voltage applied to the hot pad is in the range between about 18 to 22 volts.

6. The method of claim 1 wherein the positioning the optical fiber includes positioning the optical fiber a predetermined height above the hot pad.

7. The method of claim 6 wherein the lowering includes lowering the optical fiber to the predetermined height.

8. The method of claim 1 wherein the melting occurs when the temperature of the solder glass is above about 300° C.

9. The method of claim 8 wherein the melting occurs at about 320° C.

10. The method of claim 1 wherein the aligning includes aligning relative to an optoelectronic component.

11. The method of claim 10 wherein the optoelectronic component is a photodiode.

12. The method of claim 11 wherein the aligning includes maximizing the photocurrent of the photodiode.

13. The method of claim 1 wherein the aligning includes aligning relative to a terahertz transceiver.

14. The method of claim 1 wherein the melting includes heating the solder glass with a laser.

15. The method of claim 1 wherein the melting includes heating the solder glass with an inductive heater.

16. A optical fiber attachment comprising:

a hot pad; and

solder glass positioned on the pad, the solder glass attaching the fiber to the hot pad.

17. The fiber attachment of claim 16 wherein the hot pad includes a substrate.

18. The fiber attachment of claim 17 wherein the substrate is made of alumina.

19. The fiber attachment of claim 17 wherein heat is removed from one side of the substrate to concentrate heat to the opposite side of the substrate, the solder glass being positioned on the opposite side.

20. The fiber attachment of claim 19 wherein the one side of the substrate is provided with an undercut to concentrate heat to the opposite side of the substrate.

21. The fiber attachment of claim 19 wherein the one side straddles a slot in a module floor to which the hot pad is mounted.

22. The fiber attachment of claim 16 wherein the hot pad includes a resistive element positioned adjacent a surface of the substrate, a center pad positioned on a surface of the resistive element that is opposite of the surface of the resistive element adjacent to the substrate, and a pair of side pads positioned on the same surface as the center pad and on either side of the center pad, the side pads being electrically connected through the resistive element and electrically isolated from the center pad.

23. The fiber attachment of claim 22 wherein the side pads and the center pad are gold pads.

24. The fiber attachment of claim 22 wherein the resistive element has a resistance in the range between about 100 to 150 ohms.

25. The fiber attachment of claim 22 wherein the solder glass is originally placed on the center pad as preforms, the preforms being melted when current is applied to the hot pad through the side pads.

26. The fiber attachment of claim 25 wherein the solder glass has a melting temperature above about 300° C.

27. The fiber attachment of claim 26 wherein the solder glass has a melting temperature of about 320°C.